

Pollution: A Global Health Crisis

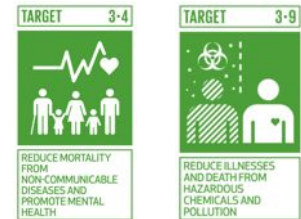
Geneva Health Forum
5 May 2022

The Global Alliance on Health and Pollution (GAHP)

Collaboration of 65+ leading institutions and governments to address pollution crisis:

- Governments of Azerbaijan, Argentina, Madagascar, Ghana, Senegal and 20 more...
- UN Development Program (UNDP), UN Environment Program (UNEP), European Commission, others, plus Universities and Civil Society

- Supported policy efforts for the UN Environmental Assembly to approve new Science Policy Panel to Tackle Pollution
- Responsible for inclusion of all forms of pollution in the SDG on Health
- Convened 2017 *The Lancet* Commission on Pollution + Health



THE LANCET

POLLUTION – A MAJOR UNDERRECOGNIZED GLOBAL ISSUE

**Household
Pollution**



**Soil
Pollution**



**Ambient Air
Pollution**



Occupational



**Water
Pollution**



Lead



The Lancet Commission on Pollution and Health

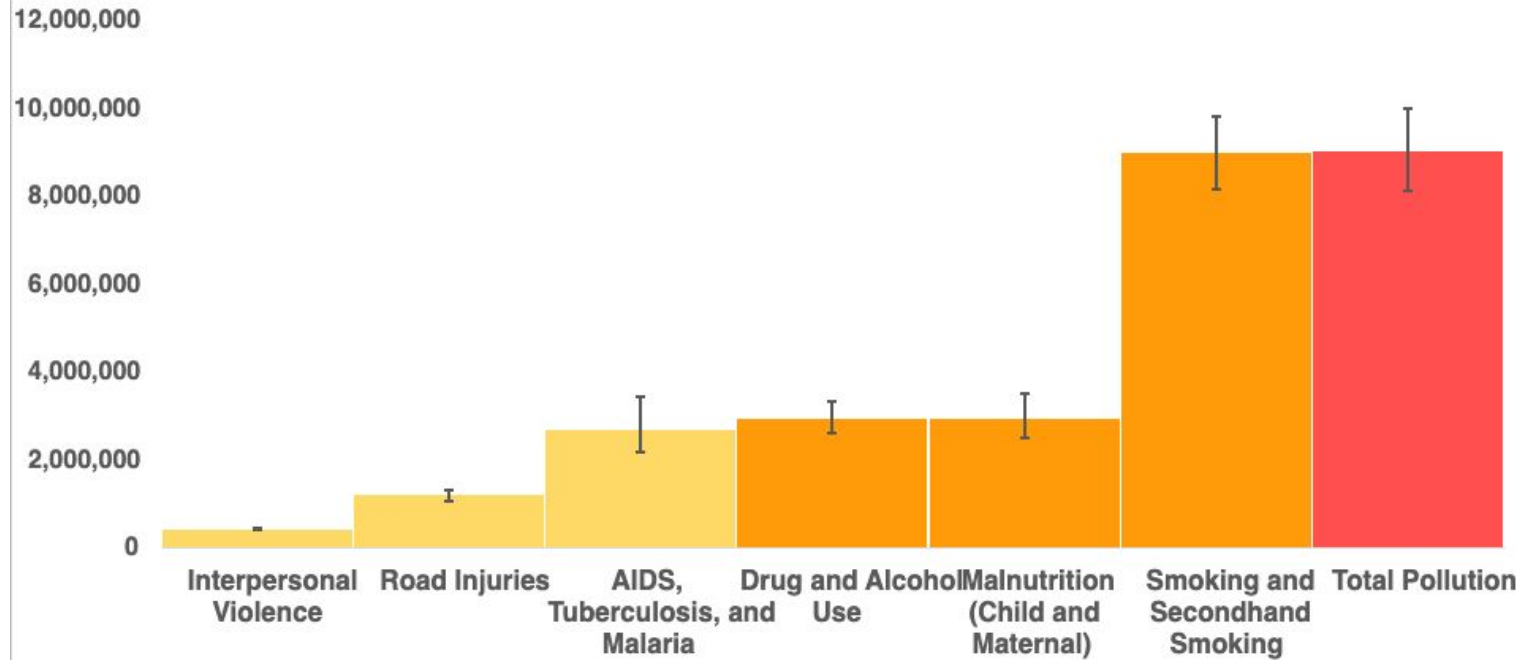


9 MILLION premature deaths = **16%** of all deaths worldwide

- **Pollution is responsible for approximately 9 million deaths per year** – one in six deaths worldwide
- Globally, the **number of deaths attributable to pollution** remain much **greater than those of war and terrorism, malaria/HIV/TB, and drugs and alcohol**, and are on a par with deaths from smoking
- **Air pollution broadly (household and ambient)** accounts for a total **6.7 mil deaths**
- **Deaths from modern pollution risk factors** – ambient PM2.5, lead, and chemicals – **are on the rise**

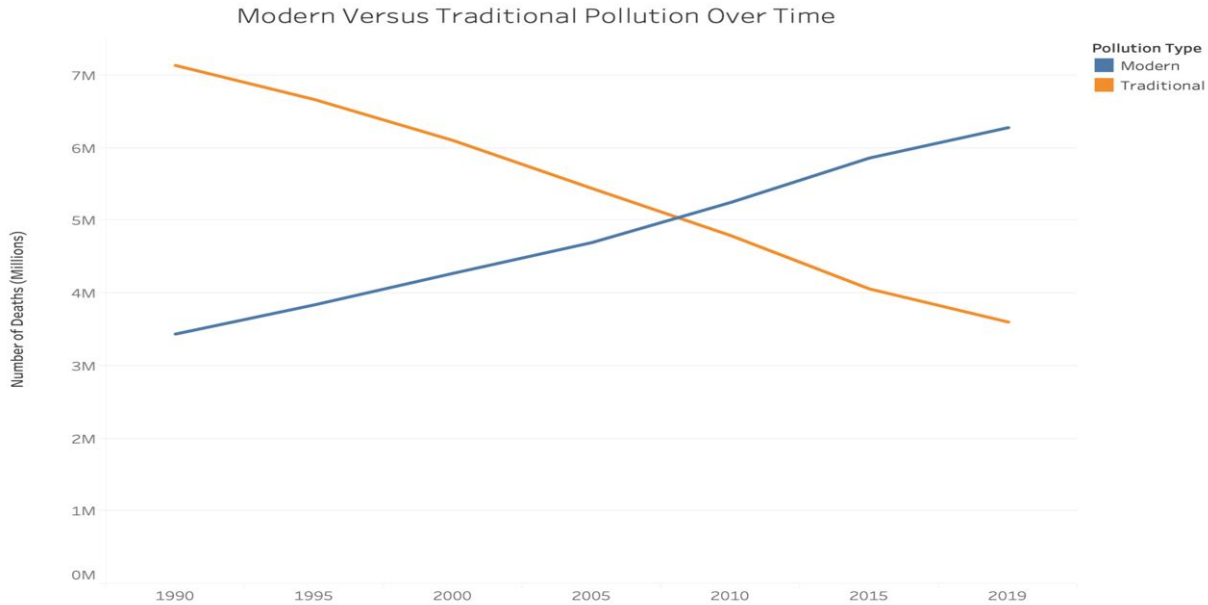
Lancet Commission: POLLUTION IS LARGEST CAUSE OF DEATH GLOBALLY

Global Estimated Deaths by Major Risk Factor or Cause, 2019*



Pollution Trends Over Time

Ambient AIR and CHEMICALS ↑
Household air and water ↓

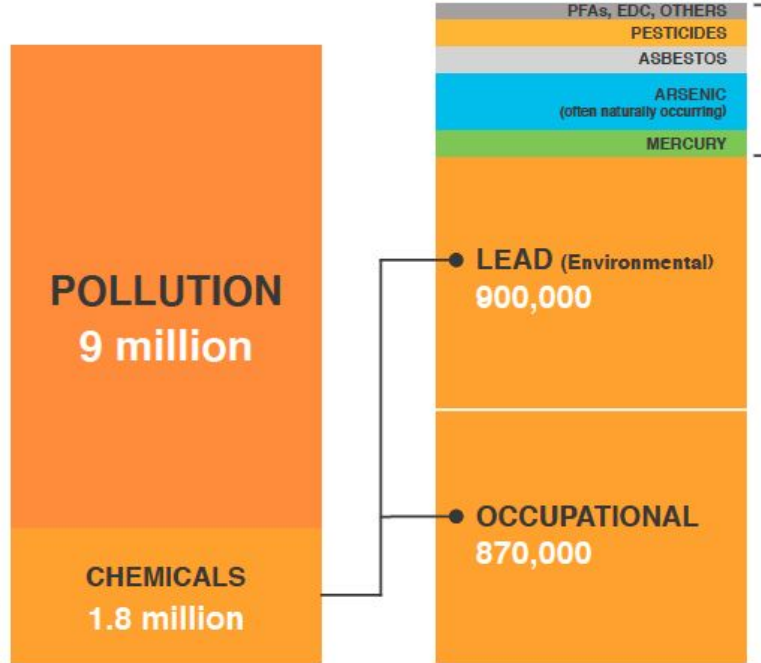


The Lancet Commission – Global Trends



Premature Deaths from Pollution

IHME 2019



Additional chemicals currently not estimated by IHME*

Chemical Pollution Severely Undercounted

*Preliminary expert assessment only. Excludes suicides.

Lead Poisoning is Ubiquitous

- **800 MILLION CHILDREN** have elevated blood-lead levels
- **ONE THIRD** of all children globally
- are estimated to have **blood lead levels exceeding 5 µg/dl**, the level at which WHO recommends intervention.



Major Sources of Lead Pollution and Chemicals

Not just lead in gasoline



LEAD ACID BATTERIES

- Car batteries
- 85 percent of all lead
- Dirty recycling practices contaminate neighborhoods
- 10% annual growth



SPICES

- Turmeric, paprika, others in South Asia, Eastern Europe, MENA
- Added for color (lead compounds are vibrant yellows and reds), and weight



COOKWARE

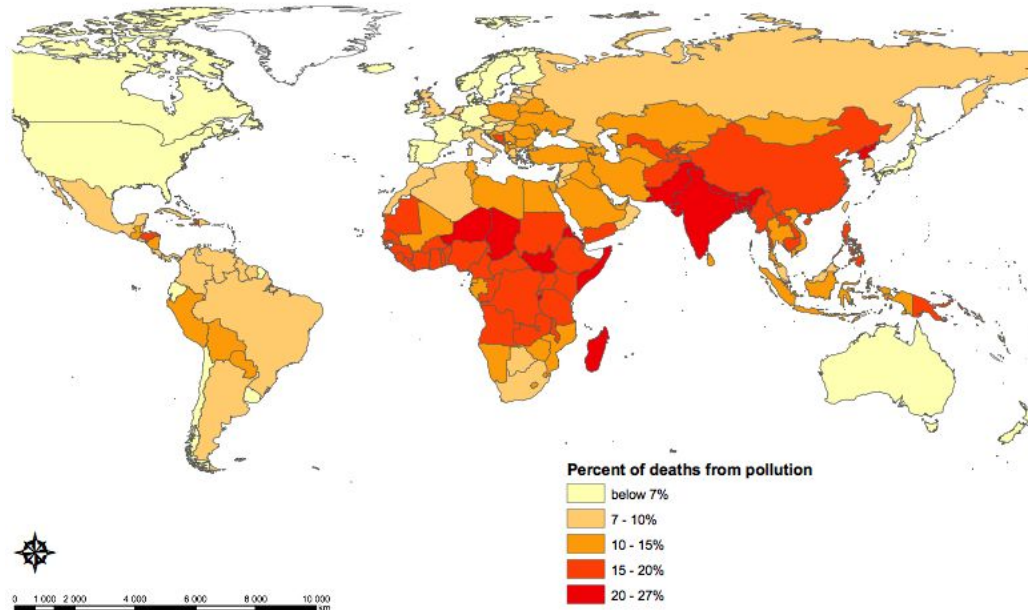
- Glazing on artisanal pottery
Also in aluminum pots

OTHER SOURCES: paint, toys, cosmetics, incense

Data: Toxic Truth Report

90% of pollution-related disease falls on low and middle-income countries

ALL Deaths from Pollution as % of Total Deaths



Children are exquisitely sensitive

- Greater exposure proportionate to body mass
- 7 times more water per Kg per day;
Hand-to-mouth activity
- Diminished ability to detoxify many chemicals
- Heightened biological vulnerability—e.g.
thalidomide, DES, fetal alcohol syndrome, lead
- More years of future life



Data: Institute for Health Metrics Evaluation (IHME)

The Toxic Truth Report- Lead Pollution

Lead (Pb) causes Permanent Brain Damage

In Babies:

Exposure prenatal, or in first year of life:

- Permanent damage to frontal cortex
- Top 100 countries have avg > 5 µg/dL
- Permanent IQ loss—3 to 5 points
- Increase in disability, learning disorders

Other health impacts—later in life:

- heart disease, kidney disease, stroke, premature birth, low birth weight.



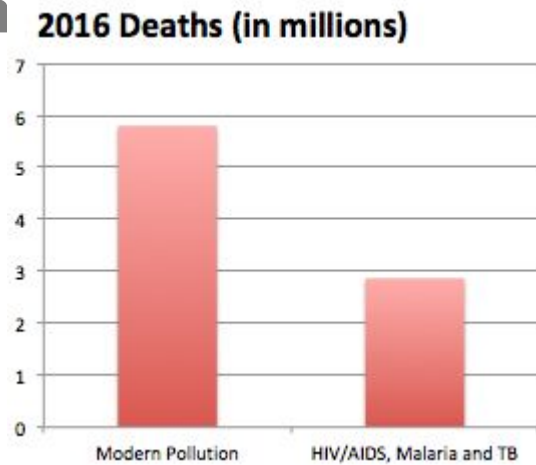
Economic costs of Pollution-related Disease

- Lancet: Up to **2% drain on LMICs GDP** from loss of productivity
- Over **7% of health care costs** in middle income countries

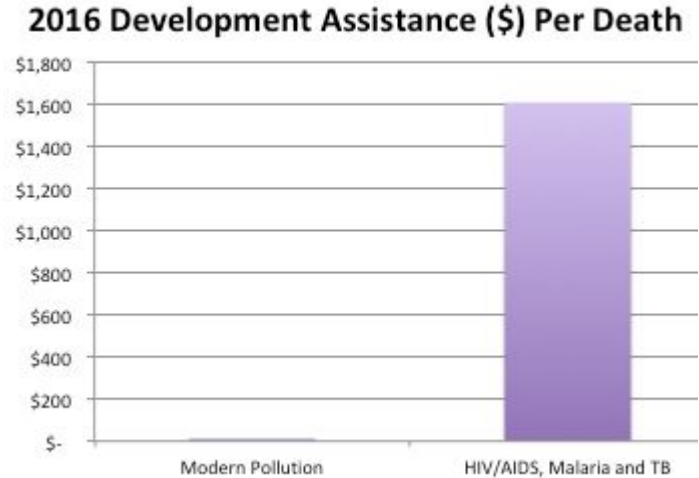
Lead (Pb) alone - Each IQ point lost equates to reduced lifetime earnings. 4% GDP for Africa, 2% GDP for Latin America and Asia



Impacts are undercounted—sol utions are underfun



(Modern Pollution - Chemicals/soil and ambient air)



Swinehart S, et al. Rethinking Aid Allocation: Analysis of Official Development Spending on Modern Pollution Reduction. *Annals of Global Health*. 2019; 85(1): 132, 1–11. DOI: <https://doi.org/10.5334/aogh.2633>

Pollution is Solvable & Preventable

I. Prioritize

Make addressing pollution a national and international priority

Adopt a One Health approach and policies that protect human, animal and planetary health

II. Allocate Resources

Corporate, philanthropic, bilateral and multilateral – role for all

Allocate green recovery funds to pollution prevention and mitigation

Create programs to address pollution

III. Science Policy Panel on Chemicals Waste and Pollution

II. Partner

Great potential Public-Private partnerships:

Corporate/pollution metrics, including in the supply chain

Specific initiatives (crop burning, batteries, industrial wastewater - ULABs can be truly circular economy

Join GAHP's Global Lead (Pb) Forum

V. Implement

Implement projects that:

- *Help countries prioritize the worst problems (GAHP's HPAPs)*
- *Stop pollution at the source*
- *Project children's health and future potential*
- *Produce tangible measurable results (i.e. reduced blood lead levels (BLLs)).*

Thank you

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Please send your questions to info@gahp.net